

Claims

- [c1] A system for delivering a charged molecule into a cell *in vivo* comprising:
 - an apparatus for positioning a charged molecule outside and generally adjacent the cell *in vivo*, wherein the cell comprises a constituent of a tissue;
 - an apparatus for delivering a first electromagnetic pulse to the cell having a strength and duration insufficient to cause electroporation of the cell and sufficient to cause an electromigration of the molecule toward the cell; and
 - an apparatus for delivering a second electromagnetic pulse to the cell having a strength and duration sufficient to cause electroporation of the cell, wherein at least one of the first pulse and the second pulse comprises an exponentially rising component.
- [c2] The system recited in Claim 1, wherein the an apparatus for delivering the pulses furthercomprises a pair of electrodes with opposite polarity and positionable in spaced-apart relation from each other, the pair of electrodes positionable adjacent the tissue.